

IN THE CLAIMS

1. (previously amended) A wave reducing hull for a vessel having a bow, midbody and a stern; said hull being characterized in having:

- (a) a generally triangular waterplane having a pointed end adjacent said bow, and a maximum water beam adjacent said stern;
- (b) said waterplane having a generally rectilinear diverging sides extending substantially from said pointed end to said maximum water beam;
- (c) said waterplane having a midbody water beam substantially smaller than said maximum water beam;
- (d) said hull having a draft adjacent said pointed end deeper than the draft adjacent said maximum water beam; and
- (e) said draft adjacent said pointed end being no greater than approximately thirty three percent (33%) of said maximum water beam adjacent said stern..

2. (original) The ship hull of claim 1 wherein said bow portion of said hull is generally free of depending structures.

13. (previously amended) A transonic hull with a displacement body portion below waterplane having in hydrostatic conditions a length, a bow, a midbody portion, a stern, and a generally triangular waterplane with an apex adjacent said bow, a wide waterplane beam adjacent said stern and a waterplane beam adjacent said midbody portion substantially smaller than said wide waterplane beam, said body portion having a first draft adjacent said bow substantially greater than a second draft adjacent said wide waterplane beam; said body portion being further characterized in having three principal longitudinal surface components, two of which form principal right and left side surface elements of said body portion, with the third principle longitudinal surface component forming a principal bottom surface element of said body portion.

1           14. (original) The structure of claim 13 in which said submerged body portion has a  
2 longitudinal axis at its waterplane, with athwarship crosssections perpendicular to said longitudinal  
3 axis, and with the projection of said crosssections in end view forming a single peripheral envelope  
4 of said crosssections with generally flat sides.

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6           15. (previously amended) A transonic hull with a displacement body portion below  
7 waterplane having in hydrostatic condition a length, a bow, a midbody portion, a stern, and a  
8 generally triangular waterplane with a longitudinal axis, with a sharp end adjacent said bow, a wide  
9 waterplane beam adjacent said stern and a waterplane beam adjacent said midbody portion  
10 substantially smaller than said wide waterplane beam, said body portion having a first draft adjacent  
11 said bow substantially greater than a second draft adjacent said wide waterplane beam, said body  
12 portion being further characterized in that the lateral edges of said waterplane adjacent and meeting  
13 at said apex are substantially rectilinear, and in that the angle included between each of said lateral  
14 edges and said longitudinal axis is an acute angle of approximately 7°.

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16           16. (original) The structure of claim 15 further characterized in that the flow exit angle in  
17 side view established between a rearward undersurface portion adjacent said stern and a line parallel  
18 to waterplane intercepting the lower corner of said stern, being no greater than approximately the  
19 angle between said lateral edges adjacent said apex.

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21           17. (original) The structure of claim 16 further characterized in that said flow exit angle is  
22 approximately 60% of the angle between said lateral edges adjacent said apex.

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24           18. (previously amended) A Transonic Hull having a submerged portion with a bow, a  
25 midbody portion, a stern and a length, with power means to move said hull in the water from a first  
26 stationary hydrostatic displacement condition to a second subcritical speed displacement regime and  
27 to a third faster super critical speed displacement regime, said submerged portion being further  
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1 characterized in having:

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3 (a) a generally triangular waterplane with a sharp end adjacent said bow, a wide waterplane  
4 beam adjacent said stern and a waterplane beam adjacent said midbody portion substantially  
5 smaller than said wide waterplane beam,

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7 (b) a profile with a deeper draft adjacent said bow, the submerged part of said bow being  
8 generally free of depending structures, and a smaller draft adjacent said wide waterplane  
9 beam,

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11 (c) and with the draft of said stern varying from approximately 4% of said base relative to  
12 a static waterplane in said hydrostatic condition, to substantially zero relative to the water  
13 surface adjacent and downstream of said stern when in said subcritical and super critical  
14 regimes.

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16 19. (canceled).

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18 20. (canceled).

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20 21. (previously amended) A wave reducing hull for a vessel comprising:

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22 a generally triangular hull having a pointed narrow bow portion, a midbody portion, and a stern  
23 portion having a beam wider than the width of said midbody portion;

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25 said hull having generally rectilinear diverging sides extending substantially from said bow to said  
26 stern;

1 said hull further characterized in having (a) a generally triangular waterplane in static conditions  
2 with a narrow end forward, a rear water beam adjacent said stern portion, and a longitudinal  
3 waterline length there between; (b) a center of gravity location no less than approximately  
4 38.5% of said longitudinal waterline length measured forward of said rear water beam; (c)  
5 power means to propel said vessel to a speed to length ratio no less than approximately 1.25  
6 with said speed expressed in knots and said length defined as the square root of said  
7 longitudinal water length expressed in feet;

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9 said hull having in said static condition a draft adjacent said bow deeper than the static draft adjacent  
10 the rear water beam; and

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12 said draft adjacent said rear water beam being between approximately one percent (1%) and  
13 approximately four and one-half percent (4.5%) of said beam.  
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